

REMARKS

A. The Status of the Claims and the Amendments

Claims 1 and 72 have been currently amended to claim the invention with greater particularity and specificity.. Claims 2, 7, 11, 14, 19-71, 79, and 81 were canceled previously without prejudice. No new matter has been introduced in the amendments to claims 1 and 72.

In particular, each of claims 1 and 72, as amended, now recites a motor drive system that “comprises a first drive and a second drive” and where “the first drive controls a horizontal movement of the assay plate and the second drive controls a vertical movement of the assay plate.” These limitations are shown on FIG. 7 and are also disclosed in paragraph [0038] bridging pages 9 and 10 of the application.

Claims 1, 3-6, 8-10, 12, 13, 15-18, 72-78, 80, and 82-85 are currently pending and are under consideration.

B. Rejections Under 35 U.S.C. § 103(a)

Claims 1, 3-6, 8-10, 12, 13, 15-18, 72-78, 80, and 82-85 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,780,648 to Sun (“Sun”) and U.S. Patent Application No. 2002/0051737 to Sollbohmer et al. (“Sollbohmer”), and further in view of U.S. Patent Application No. 2002/0176811 to Peck et al. (“Peck”) and/or U.S. Patent Application No. 2004/0014238 to Krug et al. (“Krug”) and U.S. Patent Application No. 2004/0219688 to Churchill et al. (“Churchill”) (item 4, page 3 of the Office Action). In addition, claims 1, 3-6, 8-10, 12, 13, 15-18, 72-78, 80, and 82-85 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over the patent document WO 01/67114 (“WO reference”) in view of Sollbohmer and Churchill (item 6, page 5 of the Office Action). These rejections are respectfully traversed on the following grounds.

The standard that has to be satisfied in order to make a valid rejection based on a *prima facie* case of obviousness was described in a response to a previous Office Action. This standard

In the Application of:

Coasssin et al.

Application No.: 10/789,183

Filed: February 26, 2004

Page 9

PATENT

Attorney Docket No. BECK/AURO1420-1

has been modified recently by the recent Supreme Court decision in the *KSR International v. Teleflex Inc.*, 550 U.S. __, 127 S.Ct. 1727, 82 USPQ 2d. 1385 (2007), and there is no longer a strict requirement to satisfy the old “teaching-suggestion-motivation” standard to show obviousness. Under the *KSR* rule, three basic criteria are considered. First, some suggestion or motivation to modify a reference or to combine the teachings of multiple references still has to be shown. Second, the combination has to suggest a reasonable expectation of success. Third, the prior art reference or combination has to teach or suggest all of the recited claim limitations. Factors such as the general state of the art and common sense may be considered when determining the feasibility of modifying and/or combining references. The Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness either under the old standard or according to the modified standard.

Indeed, each of claims 1 and 72, as amended, requires that a motor drive “comprises a first drive and a second drive” where “the first drive controls a horizontal movement of the assay plate and the second drive controls a vertical movement of the assay plate.” None of the cited references nor any combination thereof explicitly or implicitly teaches or fairly suggests a reagent dispensing apparatus that includes such limitations.

More specifically, Sun teaches a dispenser, the principal embodiment of which is illustrated by FIG. 1, and which comprises an array of pumps (42), chemical reservoirs (26) and dispensing tips in communication with valves (32). Sun also describes an XYZ positioning device to control the position of the assay plate (see, col. 3, lines 40-45). As correctly recognized by the Examiner, Sun neither teaches nor suggest using dispensers removably attached to a frame. To cure this deficiency of Sun, the Examiner proposed to combine Sun with Sollbohmer, because the latter reference teaches (see, e.g., FIG. 1) a head (10) comprising two reagent containers (24), where the head can be reversibly detached from the frame (22) using fasteners (50, 52).

Yet, even a combination of Sun and Sollbohmer fails to teach or suggest an apparatus having all the limitations of the present invention. Specifically, as also recognized by the

In the Application of:

Coasssin et al.

Application No.: 10/789,183

Filed: February 26, 2004

Page 10

PATENT

Attorney Docket No. BECK/AURO1420-1

Examiner, a combination of Sun and Sollbohmer fails to describe or fairly suggest switchback dispensing and some other features.

To cure this deficiency, the Examiner proposes to combine Sun and Sollbohmer with Peck and/or Krug each of which presumably describes air pressurization (FIG. 2 and FIG. 1, respectively) and further with Churchill that describes a device that employs a switchback pattern of dispensing (FIG. 6).

To obtain a switchback pattern, claims 1 and 72 as currently amended, require that a two drive motorized control system be used. The Applicants respectfully point out that while it's true that Churchill does illustrate the switchback pattern as such, this reference has no further elucidation of how such pattern may be achieved. Certainly, Churchill is absolutely silent regarding what control system may or may not be used and provides neither an explicit nor implicit disclosure and not even a fair suggestion that a two-drive motorized control system be utilized for this purpose.

Similarly, the combination of WO reference and Sollbohmer teaches an apparatus comprising a frame, a dispensing module, a pressurized manifold and dispensing means, as well as a moveable plate; the combination, according to the Examiner, may be read as teaching dispensers removably attached to a frame, due to the disclosure of Sollbohmer. However, the combination of the WO document and Sollbohmer needs be further combined with Churchill to introduce the switchback dispensing. As conceded by the Examiner, no switchback dispensing is disclosed unless the teachings of Churchill are employed. As described above, Churchill is insufficient to make a valid *prima facie* case of obviousness, because each of claims 1 and 72 has been amended and now includes the limitations not disclosed or suggested by Churchill.

In view of the foregoing, it is submitted that either a combination of Sun, Sollbohmer, Peck and/or Krug, and Churchill or that of the WO reference, Sollbohmer and Churchill fail to make a valid *prima facie* case of obviousness because either combination fails to explicitly or implicitly teach or fairly suggest all of the recited claim limitations.

In the Application of:

Coassini et al.

Application No.: 10/789,183

Filed: February 26, 2004

Page 11

PATENT

Attorney Docket No. BECK/AURO1420-1

Accordingly, each of claims 1 and 72 is patentably distinguishable over Sun and Sollbohmer in view of Peck and/or Krug and Churchill, as well as the WO reference in view of Sollbohmer and Churchill. Each of claims 3-6, 8-10, 12, 13, 15-18, 73-78, 80, and 82-85 directly or indirectly depends on either claim 1 or claim 72. Accordingly, each of claims 3-6, 8-10, 12, 13, 15-18, 73-78, 80, and 82-85 is patentably allowable for at least the same reason.

Reconsideration and withdrawal of the rejection of claims 1, 3-6, 8-10, 12, 13, 15-18, 72-78, 80, and 82-85 under 35 U.S.C. §103(a) are, therefore, respectfully requested.

In the Application of:
Coassini et al.
Application No.: 10/789,183
Filed: February 26, 2004
Page 12

PATENT
Attorney Docket No. BECK/AURO1420-1

CONCLUSION

In view of the above amendments and remarks, reconsideration and favorable action on all claims are respectfully requested. In the event any matters remain to be resolved, the Examiner is requested to contact the undersigned at the telephone number given below so that a prompt disposition of this application can be achieved.

No fee is believed due in connection with the filing of this paper. However, if any fee is due, the Commissioner is hereby authorized to charge any additional amounts required by this filing, or credit any overpayment, to Deposit Account No. 07-1896 referencing the above-identified attorney docket number.

Respectfully submitted,



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